

CLAIMS

1. A fuel cell system, comprising:
a fuel cell including a solid polymer electrolyte membrane and a fuel electrode and an oxidant electrode placed on said solid polymer electrolyte membrane;
5 a container storing a fuel placed in contact with said fuel electrode;
an outlet passage discharging the gas contained in said container into the air; and
a catalyst placed in said outlet passage that oxidizes said
10 gas.
2. The fuel cell system as set forth in claim 1, further comprising an oxidation-accelerating unit accelerating oxidation of said gas by said catalyst.
3. The fuel cell system as set forth in claim 2,
wherein said oxidation-accelerating unit has an oxygen-supplying unit supplying oxygen to said gas.
4. The fuel cell system as set forth in claim 2,
wherein said oxidation-accelerating unit has a heating unit heating said gas or said catalyst.
5. The fuel cell system as set forth in claim 1, comprising a plurality of fuel cells,

wherein said container is formed in contact with each of said fuel electrodes of said plurality of fuel cells.

6. The fuel cell system as set forth in claim 1, further comprising a recovering passage recovering the fuel supplied to said fuel electrode,

5 wherein said outlet passage is configured to discharge the gas contained in the fuel passing through said recovering passage into the air.

7. The fuel cell system as set forth in claim 1, further comprising a gas-liquid separation membrane placed between said container and said outlet passage,

5 wherein said catalyst is configured to oxidize said gas discharged through said gas-liquid separation membrane into said outlet passage.

8. The fuel cell system as set forth in claim 1,

wherein said fuel cell is a direct type fuel cell in which a liquid fuel is supplied to said fuel electrode.

9. A gas treatment apparatus, detachably connected to a fuel cell including a unit cell having a solid polymer electrolyte membrane, and a pair of fuel electrode and oxidant electrode placed on said solid polymer electrolyte membrane and a container storing a fuel
5 placed in contact with said fuel electrode, comprising:

a housing having an inlet introducing gas contained in said

container and an exhaust vent discharging said gas into the air; and
a catalyst which is placed in said housing and oxidizes said
gas taken in said housing;

10 wherein said catalyst is placed so as to oxidize said gas
introduced through the inlet of said housing and then discharge said
gas after oxidation through said exhaust vent.

10. The gas treatment apparatus as set forth in claim 9, further
comprising an oxidation-accelerating unit accelerating oxidation of
said gas by said catalyst.

11. The gas treatment apparatus as set forth in claim 10,
wherein said oxidation-accelerating unit has an
oxygen-supplying unit supplying oxygen to said gas.

12. The gas treatment apparatus as set forth in claim 10,
wherein said oxidation-accelerating unit has a heating unit
heating said gas or said catalyst.

13. A method of operating a fuel cell, comprising:
oxidizing gas discharged from a fuel cell including a solid
polymer electrolyte membrane, and a pair of fuel electrode and oxidant
electrode placed on said solid polymer electrolyte membrane with a
5 catalyst; and then,
discharging the oxidized gas into the air.

14. The method of operating the fuel cell as set forth in claim

13,

wherein said fuel cell is a direct type fuel cell driven by supplying a liquid fuel to said fuel electrode,

5 wherein said fuel cell further includes a container that is placed in contact with said fuel electrode and stores said liquid fuel and

wherein said gas is discharged from said fuel container.

15. The method of operating the fuel cell as set forth in claim 13, further comprising accelerating oxidation by said catalyst.

16. The method of operating the fuel cell as set forth in claim 15,

wherein said accelerating oxidation includes supplying oxygen to said gas.

17. The method of operating the fuel cell as set forth in claim 15,

wherein said accelerating oxidation includes heating said gas or said catalyst.